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Electromagnetic transients and r-process nucleosynthesis from the disk wind outflows of neutron star merger remnants RODRIGO FERNANDEZ, DANIEL KASEN, ELIOT QUATAERT, University of California, Berkeley, BRIAN METZGER, Columbia University, JOSIAH SCHWAB, University of California, Berkeley, STEPHAN ROSSWOG, Stockholm University — The remnant accretion disk formed in binaries that involve neutron stars and/or black holes is a source of non-relativistic ejecta. The outflow is launched on a viscous and/or thermal timescale, and can provide an amount of material comparable to that in the dynamical ejecta. I will present work aimed at characterizing the properties of these winds through two-dimensional, time-dependent hydrodynamic simulations that include the relevant physics needed to follow the ejecta composition. In particular, I will focus on the effect of the spin of a promptly-formed black hole remnant on the wind, and on the interaction of the disk wind with the dynamical ejecta. I will discuss the implications of these results for the optical/IR signal from these events and for the origin of r-process elements in the Galaxy.

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